(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 23 June 2005 (23.06.2005)

PCT

(10) International Publication Number WO 2005/056760 A3

A61K 38/16, (51) International Patent Classification⁷: 38/12

(21) International Application Number:

PCT/US2004/040709

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/527,082	3 December 2003 (03.12.2003)	US
60/539,387	26 January 2004 (26.01.2004)	US
60/592,744	29 July 2004 (29.07.2004)	US
60/614,518	29 September 2004 (29.09.2004)	US
60/623,387	29 October 2004 (29.10.2004)	US

- (71) Applicant (for all designated States except US): NEOSE TECHNOLOGIES, INC. [US/US]; 102 Witmer Road, Horsham, PA 19044 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DEFREES, Shawn [US/US]; 126 Filly Drive, North Wales, PA 19454 (US). BAYER, Robert, J. [US/US]; 6105 Dirac Street, San Diego, CA 92122 (US).
- (74) Agents: MANN, Jeffry, S. et al.; Morgan Lewis & Bockius LLP, 2 Palo Alto Square, Suite 700, 3000 El Camino Real, Palo Alto, CA 94304 (US).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 18 August 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: GLYCOPEGYLATED FOLLICLE STIMULATING HORMONE

(57) Abstract: The present invention provides conjugates between follicle stimulating hormone and PEG moieties. The conjugates are linked via an intact glycosyl linking group that is interposed between and covalently attached to the peptide and the modifying group. The conjugates are formed from both glycosylated and unglycosylated peptides by the action of a glycosyltransferase. The glycosyltransferase ligates a modified sugar moiety onto either an amino acid or glycosyl residue on the peptide. Also provided are pharmaceutical formulations including the conjugates. Methods for preparing the conjugates are also within the scope of the invention.



